INTRODUCTION

1.1. Purpose of the Document:

This document is created in order to explain the **iOrder** system, relevant audience and its stakeholders. In this document you will learn what the **iOrder** system is about and how to deal with the system to develop a process which will help the Restaurant chain to improve and become more efficient and profitable in the consumer market. To recognize the chain, you should focus on each and every aspect of the restaurant for growth perspectives. These aspects will not only help the organization to become growth oriented, but will also improve quality management on all levels.

1.2. Intended Audience for the Document:

In this document we will cover the indented audience for this system, how this audience makes a difference, what benefits will be drawn by identifying the audience of the system and how we can make an organization more profitable. Every new business experiences initial difficulty in showing immediate profit, but a positive presence in the market will certainly help the organization to reap the benefits and create awareness, which in turn, will lead to a positive reputation in the market.

Documents play an important role in any business regarding documentation of policy, key concepts and important information concerning recording of processes for later reference. When developing the system and creating processes, proper documentation is helpful in understanding the system.

Intended Audience of this document is as follows:

1. Company Stakeholders are the persons involved from top to bottom, whom are involved in the development of food and culinary products, taking orders and serving the customers.

2. Stakeholders are those in senior management, such as the chairman, director, vice president and any such stakeholders who hold some unit of shares in the company.

3. This document is very helpful from the perspective of understanding the system and reaping the benefits required for the system.

4. Customers are indirectly part of the audience, as they are the market for which we cater.

5.Persons involved in the development of software systems regarding the process of creating new orders, accepting the orders on the device, presenting the order on the display for kitchen staff, who has to prepare the order.

6. Another part of the audience is represented by the people who serve the customers and they play an important part in the process, because they are responsible for managing the orders effectively.

As per the points noted above, we can conclude that the intended audience would always be helpful to the system if utilized efficiently. The organization, as well as its employees, will reap the benefits when the system is effectively developed, processed, and optimized.

2.   PRODUCT OVERVIEW

iOrder is a multi-platform, Internet enabled POS and restaurant order processing and stock tracking application. The application covers three spheres of interaction/processing:

1. Business to Customer – iOrder will work to automate to a large extent and speed up the process of customers doing business with the restaurant.

2. Internal Business Processes – **iOrder** will automate internal processes while making process evaluation and analyses easier for management.

3. Business to Supplier – **iOrder** will facilitate the reordering and order tracking between the restaurant and suppliers.

2.1. Product Functions

Functionality is determined by user level and will be detailed as such.

2.1.1. Manager/Owner

Owners and managers need a central place from which to monitor and manage the business with a system that will easily accommodate the expansion of the restaurant group. Managers will have access to the same functionality that all other roles will have. Managers will be able to manage on three levels as previously explained:

2.1.2. Report on the following activities

- Order totals per day/week/month per branch and group
- Daily analyses down to 5 minute increment level for capacity planning activities
- Order size/popularity
- Top Customers
- Top selling waiting staff
- Kitchen turnaround times

2.1.3. Internal Business Processes

- Stock tracking
- Stock usage and reorder point calculation
- Staff performance analyses
- Missed orders – Orders that were incorrectly placed

- Stock used versus stock used in orders delivered

2.1.4. Business to Supplier

- Stock resupply bid submission – Managers submit an order to multiple suppliers and suppliers place a bid for the supply
- Bid analyses and acceptance
- Order delivery time analyses

2.1.5. Waiting Staff

- Submit and track orders
- Order customization within certain limits
- Client maintenance – Be able to know when they are dealing with regular customers and their preferences.

2.1.6. Kitchen Staff

- Order tracking and tracing
- Order sequencing and line balancing
- BOM (Bill of materials) for order
- Late order alert: Alert staff if an order has not been finished within a specified time limit.

2.1.7. Customers

- Place and track orders.
- Receive special promotions
- Specify pick-up time
- Payment

- Automatic order prioritization

2.2.   System

System security will be based upon user roles and ordering and internal processing will run on different servers in order to insure that order processing always has fast processing times. The processing server will receive orders and deliver all other functions related to the system. This will make the system, from a customer/ordering perspective, perform at a certain level.

2.3.   Environmental

The system will be used in a harsh environment and hardware devices must be protected accordingly. There will be a combination on servers hosted online and servers within branches so that branches will be able to function even with some level of failure of certain systems.

2.4.   Architectural Constraints

To keep development costs to a minimum, we will focus on Open Source software as much as possible. Currently, there are no legal constraints other than HR and re-order that needs clarity, because all branches are located in the same region and legal jurisdiction. We need consultation on what we may measure from a HR perspective as well as our legal standing for incorrect ordering if we need to return items. In line with the budget, no more than two coders and one project manager will be used for the project and should be delivered within 8 weeks. The complexity of the project warrants one junior developer and one lead, advanced, developer. We will make use of Agile Scrum due to the size of the project and will give easy feedback and workable solutions to the client early in the project. The client agreed, due to budget constraints, to come to our offices for the daily scrum meeting. The client will bring with the necessary people that will work with the module currently being

developed, the kitchen ordering system will be guided by the head chef etcetera, to get the best feedback for what is being built at the time.

3.   EXTERNAL INTERFACE REQUIREMENTS

To establish a full comprehension of the interface requirements for the Point of Sale (POS) system the image detailed below highlights the following functionalities requested by the customer:

1. Owners and managers have the ability to keep track of the inventories, quantities and item prices with additional functionality which allows for future orders to be implemented as required.

2. Wait Staff are provided with the ability to take orders at the table using hand-held devices, as well as given the ability to amend orders if necessary.

3. Provide Kitchen staff with the functionality to display orders on various stations as well as recipe details and amount of food remaining.

4. Customers from the general public will have the ability to order online via the internet, as well as entering online payment details.
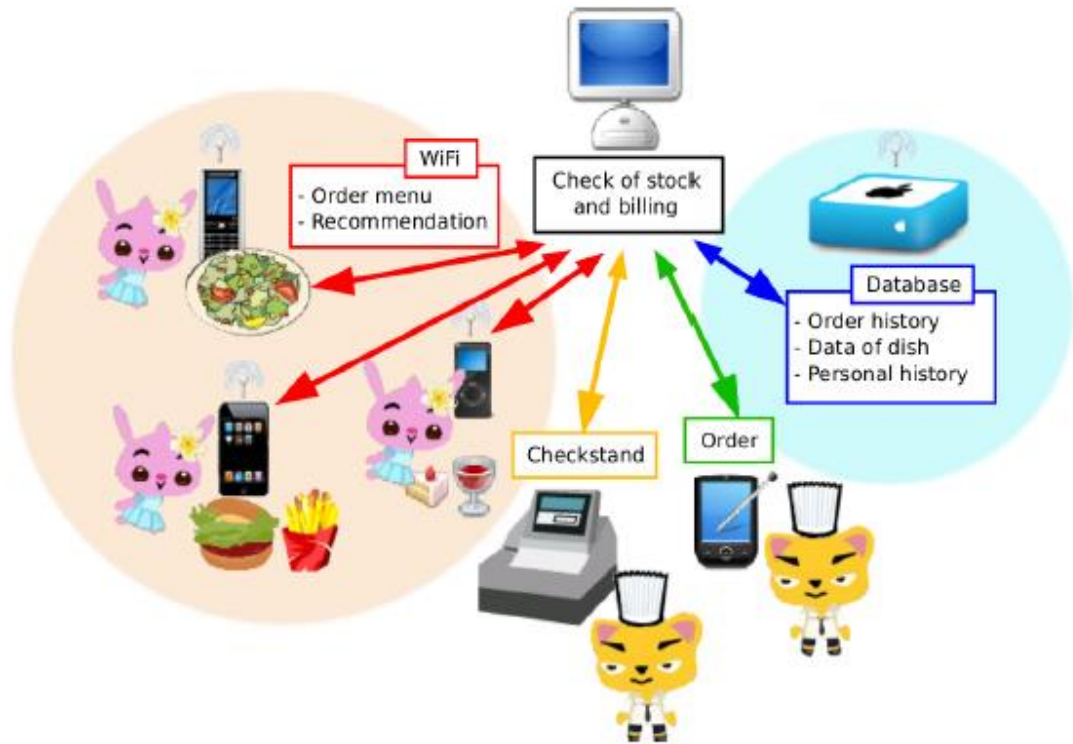
Figure 1 – overview of POS system (Kashima, Matsumoto and Ishii, 2010)

Having established the overview as detailed above, the following elements will now provide a more detailed infrastructure of the system requirements.

3.1. Owner/Manager

Through the implementation of specialized POS software, a centralised system keeps track of all current stock, order details inventories and both prices of consumables, as well as future order requirements. When orders are placed and actioned by the general public, wait staff and kitchen staff, the necessary entries are registered on the centralized system. This information can be accessed through a user-friendly interface on the central PC located within the owner/managers office. Furthermore, the software can be customized to include automated reporting procedures including stock checks, as well as other auditable elements.

3.2. Wait Staff

The wait staff will be provided with mobile POS devices which will work under a specialized operating system running on a powerful processor. The device will have a 3.7" touch screen with numerous wireless communication methods including GPRS, 3G, Bluetooth and Wi-Fi. The device will have a menu function whereby the wait staff will forward the orders taken directly back to the kitchen staff for processing. In addition, the device will include the following functionalities:

Security Smartcard Magstripe Signature Capture Contactless Multimedia Touchscreen

thus allowing for secure payment methods using all type of credit cards, loyalty cards, magnetic stripe cards, and smartcards with chip, as well as contactless card functionality to allow for customer payment. In addition, printer capabilities for receipt requirements will also be provided with the same mobile device (Burmistrov. n.d.).

Future advances may result in such technologies as RM Kiosk being implemented, which will provide the wait staff with mobile POS solutions whereby they will have the ability to present customers with a self-ordering facility. This will grant the in-house customer an iPad POS app with a user-friendly interface which will allow them to view the menu, up to the minute prices and promotions (ActionSystems, 2013).

3.3. Kitchen Staff

Once the wait staff or general public process orders directly to the kitchen staff, the kitchen staff will receive notification through the generating of tickets in the kitchen, which will then alert them to action accordingly. In addition, kitchen staff can register all menu items, including amount available and when processed, can use a barcode facility to account for depleting number of items which can automatically notify wait staff and general public if menu items are no longer available.

3.4. General Public

The public will be able to view and make orders through the restaurant website, but in addition will be able to download an iPad POS app as similarly outlined above by ActionSystems (2013). Both ordering through the website and iPad app will allow the public the facility to order online and provide payment for the menu items selected, which will then be automatically processed through the centralized POS system.

3.5. Hardware requirements

- Desktop + monitor
- Touchscreen mobile POS device per wait staff (numbers to be confirmed)
- Kitchen receipt printers (numbers to be confirmed)
- Battery Backup/surge protector
- Router w/hardware firewall
- External Backup Usb Drive
- Barcode scanner

3.6. Software requirements

- Bespoke POS centralised software
- Barcode Express (Barcode Printing Module)
- Pocket Inventory Handheld Inventory Software

3.7. Services

- Hardware Setup
- Software Installation and configuration
- Onsite Training (2 x 2 hour package)
- Online Site Support
- Technical Support (fee to be agreed up on)

- Inventory Import

(POSnation, n.d.)

4.   FUNCTIONAL REQUIREMENTS

4.1.   Purpose

The purpose of this section is to describe different functionality that the POS system must provide in order to meet the restaurant needs, objectives and business process.

4.2.   Overview

"Pedersen & Hedegaard & Sharp (2006) stated that "A POS system is a system designed to register sales and payments at the point of sale when goods are sold". As mentioned, popular local restaurants aim to develop a POS system to facilitate the sales process of the restaurant. The owner intends to handle, keep track and manage the full lifecycle of restaurant processes and server multiple user levels.
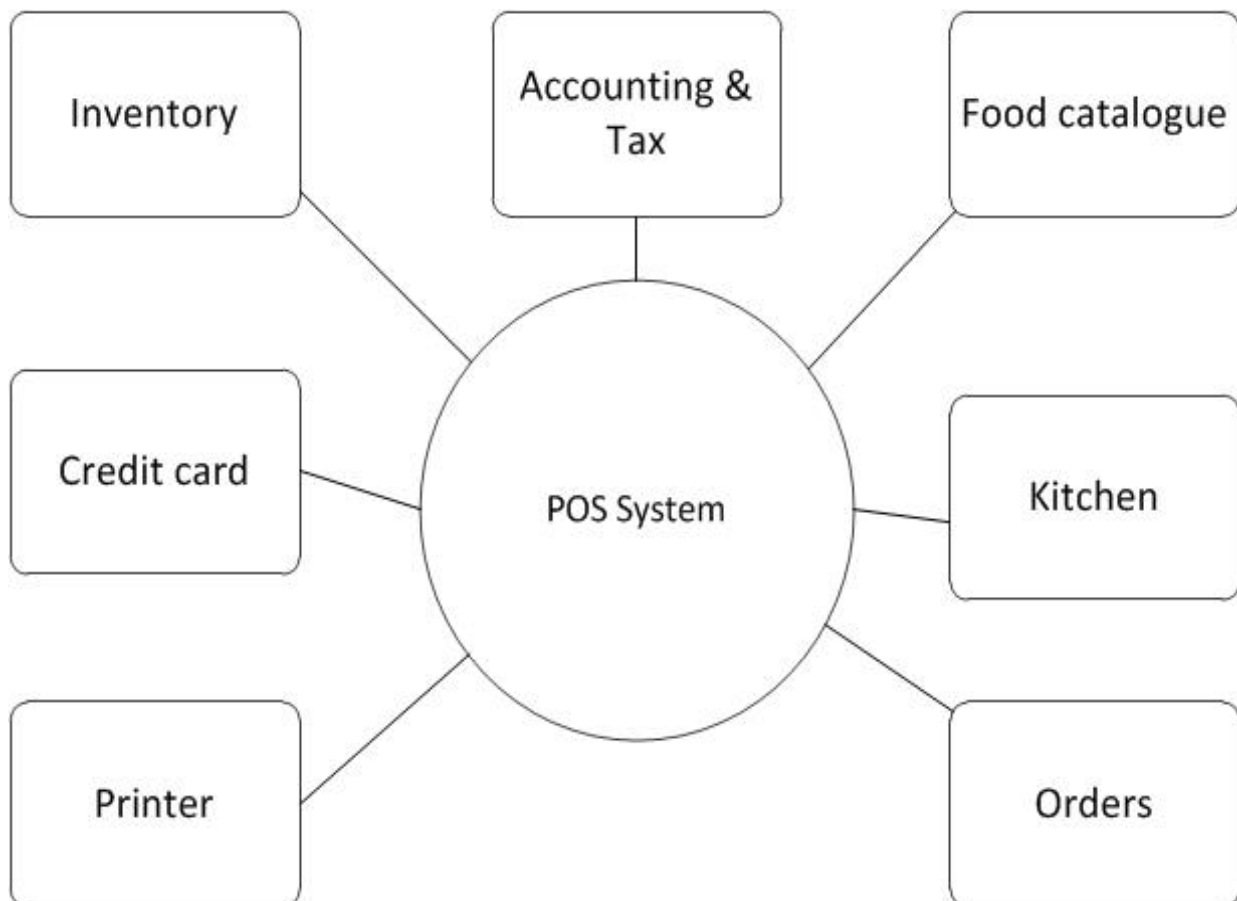
4.3.   Major functional areas

4.3.1. Order Process

Order process will be handled with friendly and easy to use system interface within the waiters (or waitress') hand held device to improve their efficiency and enable them to serve patrons better. That includes all required information regarding quickly placing an order such as Table ID, Table status, Waiter ID, Meal type, Menu item list, order date and time, food type (hot/cold food), patron's comment (spicy/regular, well done/medium and etc…), number of current order(s) under process or pending and device alert when the order is ready. Above features will enable waiter/waitress to effectively serve multiple dining tables with different orders at the same time with less effort.

Once the order is confirmed by any given customer and placed, it'll directly send to the proper area, based on selected food type and kitchen staff will immediately start the food

preparation process. Patrons are welcome to update their order at any time; our system takes this feature in consideration and waiter/waitress accommodate such requests by sending it back to the kitchen with the updates.

At the end of the meal, the relevant waitress/waiter can easily print the check from his device, considering any additional service or tax.

Home	Help

Please Sign In

Select your name:

Name
Waiter A
Waiter B
Waiter C
Waiter D
Waiter E

Home	Help

Welcome, Waiter A   Sign out

Tables   Orders

Table No	Status
Table 1	3 Guests
Table 2	2 Guests
Table 3	5 Guests
Table 4	Empty
Table 5	1 Guests

4.3.2. Food Preparation

In both kitchen areas, the kitchen staff immediately receives any placed order forwarded from waiter staff, ordered by the order time and considering sequence required of the first in first out, in addition to meal details and waiter/waitress name. The data displayed on these stations for the kitchen staff would ideally consist of: an automatically created sequence ID based on the time and date of the received order in order to prepare a sequence of first in first out food preparation, the time required for passport delivery (as input from kitchen staff in case of hot meal) in order to re-sequence, once the order is

ready, kitchen staff can send an alert to the assigned waiter/waitress to pick up the meal to be delivered to the patrons.

4.3.3. Inventory

Restaurant owners/managers have a lot of features to track and to maintain business processes in order to save time and money. This include configuring payment methods (cash, credit card), payment gateway, stock control (to ensure that the restaurant always holding the required amount of food material, calculate needs, update food catalog and price and purchase orders.

Our powerful inventory software allows you to efficiently operate your business from anywhere through PC, IPad and Iphone and to keep track of your business with powerful reports that improves profits.

4.3.4. Web Ordering

The restaurant online ordering portal is designed to be more competitive, increase delivery orders and customer loyalty. Online portal offers several features like creative designs matching restaurant brand, multilingual capability, and user friendly and are mobile compatible. Customers are able to easily browse the menu, have multiple payment choices (Credit card, bank deposit or cash up on delivery), can place orders with a few clicks and then have their orders routed automatically to kitchen staff. Customers are also able to track their order status online and check order history. Managers are able to define delivery zones, set different menus (catering, breakfast, banquet, lunch, dinner) with unlimited items, manage menu updates and changes or promote discounts. The portal is linked directly with the POS database with a high security level.

4.3.5 Features for the Future

The system being developed will have several future improvements that include, but are not limited to: payroll and time tracking for restaurant's employees, full integration between different branches for inventories, payroll, work schedules etc. to facilitate the interchanging process among restaurant stores including (employees, food, and supplies), as well as handling and calculation of taxes for each state with minimal effort to managers.